

REMARKS

Initially, Applicants would like to thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. §119, as well as receipt of a certified copy of the priority document upon which Applicants' claim for foreign priority is based. Applicants would also like to thank the Examiner for acknowledging consideration of each of the documents listed on the Form PTO-1449 submitted with the Information Disclosure Statement on August 29, 2006. Finally, Applicants would like to thank the Examiner for indicating the acceptance of the drawings filed with the present application on June 2, 2006.

In the outstanding Office Action, the title was objected-to as not being descriptive of the invention to which the claims are directed. Upon entry of the present Amendment, the title of the application will have been replaced with the replacement title: HEATING APPARATUS, FIXING APPARATUS AND IMAGE FORMING APPARATUS. The replacement title is fully descriptive of the disclosure to which the claims of the present application are directed. However, should the herein-contained replacement title be found unacceptable, Applicants request that the Examiner suggest in the next Office Action a Title that would be found acceptable.

Claims 1, 6, 7, 10, 12, 14 and 15 were rejected under 35 U.S.C. §102(b) over RICOH (JP 2003-017221). Claims 2-5, 8, 9, 11 and 13 were rejected under 35 U.S.C. §103(a) over RICOH in view of MATSUSHITA (JP 2001-188430) or CANON (JP 8-16006).

Upon entry of the present amendment, various of the claims will have been amended, and claim 12 will have been cancelled without prejudice to or disclaimer of the subject matter recited therein. The herein-contained amendments should not be considered an indication as to Applicants' acquiescence as to the propriety of any outstanding objection or rejection. Rather,

Applicants have amended claims in order to advance prosecution and obtain early allowance of claims in the present application.

Applicants traverse the rejection of claims 1, 6, 7, 10, 12, 14 and 15 under 35 U.S.C. §102(b) over RICOH. In this regard, characteristics of the heating apparatus in claim 1 include:

- an exciting coil, a heating element, and an abnormally high temperature detection section
- the abnormally high temperature detection section and the exciting coil are disposed on the same side of the heating element
- the abnormally high temperature detection section is disposed between conductor wires forming a winding bundle of the conductor wire of the exciting coil

Features of an exemplary embodiment which provides support for claim 1 are shown by way of example in Figure 4 of the present application with an exciting coil shown by way of example as element 231, a heating element shown by way of example as element 210, and an abnormally high temperature detection section shown by way of example as element 301.

According to the combination recited in claim 1, when a heating element reaches an abnormally high temperature, an abnormally high temperature detection section can be speedily and reliably operated to detect the abnormally high temperature irrespective of the material and temperature characteristic of the heating element heated using electromagnetic induction.

RICOH discloses a temperature detection component S2 and heating sections 3. Heating sections 3 of RICOH correspond to a winding bundle of the conductor wire of the coil in claim 1 (i.e., not the heating element 210 shown in Figure 4 or the heating element recited in claim 1). However, the temperature detection component S2 is arranged between heating sections 3, as shown in Fig.2(b), and not between conductor wires forming a winding bundle of the conductor

wire of the exciting coil. Accordingly, RICOH does not disclose at least the above-noted features recited in the combination of claim 1.

At least in view of the herein-contained amendments and remarks, claim 1 is allowable over RICOH. Claims 6, 7, 10, 12, 14 and 15 are each allowable over RICOH at least for depending, directly or indirectly, from an allowable independent claim 1, as well as for additional reasons related to their own recitations. Claims 2, 5, 8-9 and 11 are each allowable over RICOH in view of MATSUSHITA or CANON at least for depending, directly or indirectly, from an allowable independent claim, as well as for additional reasons related to their own recitations.

Applicants traverse the rejection claims 2-5, 8, 9, 11 and 13 under 35 U.S.C. §103(a) over RICOH in view of MATSUSHITA or CANON. In this regard, claims 2, 5, 8-9 and 11 are each allowable at least for depending, directly or indirectly, from an allowable independent claim 1 (as set forth above), as well as for additional reasons related to their own recitations.

Characteristics of the heating apparatus in claim 3 include:

- an exciting coil, a heating element, and an abnormally high temperature detection section
- a center core at a center position of the winding of the conductor wire of the exciting coil,
- the abnormally high temperature detection section is disposed in an area interposed between the exciting coil and the center core.

Features of an exemplary embodiment which provides support for claim 3 are shown by way of example in Figure 8 of the present application with a center core shown by way of example as element 232b, an exciting coil shown by way of example as element 231, and an abnormally high temperature detection section shown by way of example as element 301.

Characteristics of the heating apparatus in claim 4 include:

- an exciting coil, a heating element, and an abnormally high temperature detection section
- a side core at an outer side of the winding of the conductor wire of the exciting coil
- the abnormally high temperature detection section is disposed in an area interposed between the exciting coil and the side core.

Features of an exemplary embodiment which provides support for claim 4 are shown by way of example in Figure 3 of the present application with a side core shown by way of example as element 232c, an exciting coil shown by way of example as element 231, and an abnormally high temperature detection section shown by way of example as element 301.

The Office Action asserts that MATSUSHITA discloses a heating device equipped with a center core within the windings of the excitation coil, and side cores outside the windings of the excitation coil. The Office Action also asserts that CANON discloses a heating device in which a temperature detector is sandwiched between a core and excitation coil. Further, as set forth above, the temperature detection component S2 of RICOH is arranged between heating sections 3 of the excitation coil, as shown in Fig.2(b).

When RICOH and MATSUSHITA are combined, a structure could be obtained in which the temperature detection component S2 of RICOH is arranged between (laterally) sections 3 of the excitation coil, and the center core is disposed within (interior to) a layer formed by the temperature detection coil S2 and the sections 3 of the excitation coil. Further, a structure could be obtained in which the temperature detection component S2 of RICOH is arranged between (laterally) sections 3 of the excitation coil, and the side core is disposed outside (exterior to) a layer formed by the temperature detection coil S2 and the sections 3 of the excitation coil. However, the structure recited in claims 3 or 4 would not be obtained by a combination of

RICOH and MATSUSHITA, because the combination of RICOH and MATSUSHITA would still result in a structure in which the temperature detection component S2 is arranged between (laterally) heating sections 3 of the excitation coil, and not in an area interposed between the exciting coil and the center core or in an area between the exciting coil and a side core.

At least in view of the above remarks, claims 3 and 4 are allowable over a combination of RICOH and MATSUSHITA. Claim 13 is allowable over RICOH in view of MATSUSHITA at least for depending, directly or indirectly, from an allowable claim 3, as well as for additional reasons related to its own recitations.

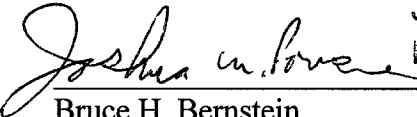
As shown in Figure 1 of CANON, a safe element 7 is disposed on a side (outside) of iron core 2, and on a side (laterally) of element 3. However, CANON does not disclose the safe element 7 in an area interposed between an exciting coil and the core 2. Thus, when RICOH and CANON are combined, a structure could be obtained in which the temperature detection component S2 of RICOH (safe element 7 of CANON) is still disposed between (laterally) the winding bundles of the excitation coil in RICOH, but not in an area interposed between an exciting coil and a side core or in an area interposed between an exciting coil and a center core.

At least in view of the above remarks, claims 3 and 4 are each allowable over a combination of RICOH and CANON. Claim 13 is allowable over RICOH in view of CANON at least for depending, directly or indirectly, from an allowable claim 3, as well as for additional reasons related to its own recitations.

Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

If there should be any questions, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,  
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